High Efficiency CC/CV/CP Buck Converter for QC/PD Application

1 Description

The SC8103 is a high efficiency synchronous buck converter with a wide input voltage from 4.6V to 36V. The SC8103 regulates the output voltage by setting the divider resistor. It also provides high accurate output current limit. The converter enters Constant Current (CC) Mode in case output current reaches the setting current limit. The output power can be programmed to 18W by a resistor. The Constant Power (CP) control makes it easy to fulfil the power profile requirement of fast charge.

The SC8103 adopts programmable frequency setting and operating modes selection for PWM and PFM with minimum external components. The SC8103 also supports full protections including input under voltage protection, output over voltage protection, short current protection and auto-restart, over temperature protection.

The SC8103 adopts 32 pin QFN 5x5 package.

2 Features

- Wide input operating voltage from 4.6V to 36V
- 27mΩ/27mΩ Low Rdson Internal Power MOSFETs
- Max output current capacity with 4.5A
- 100% duty cycle operation
- Low quiescent current
- Programmable output power limit
- PFM/PWM mode selection
- Adjustable frequency 80kHz to 600kHz
- Hiccup and auto-restart
- Full protection of UVLO, OVP, OCP, OTP
- Available in QFN-32 5x5 Package

3 Applications

- Car Charger
- Multi-Ports Wall Charger
- Hub
- Industrial applications

4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC8103QDJR	32 pin QFN	5 mm x 5 mm x 0.75 mm